BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

In the Matter of the Application of California-American Water Company (U210W) for a Certificate of Public Convenience and Necessity to Construct and Operate its Coastal Water Project to Resolve the Long-Term Water Supply Deficit in its Monterey District and to Recover All Present and Future Costs in Connection Therewith in Rates.	Application 04-09-019 (Filed September 20, 2004; Amended July 14, 2005).

DIRECT TESTIMONY OF KEVIN THOMAS

PHASE 2 ISSUES

REVISED

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Originally Served: May 22, 2009
Revised Served: July 6, 2009

TABLE OF CONTENTS

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PHASE 2 ISSUES

I. INTRODUCTION

Q1. Please state your name, business address and telephone number.

A1. My name is Kevin Thomas, CEP; my business address is 40810 County Center Drive, Suite 100, Temecula, CA 92591; and my telephone number is (951) 506-2074.

Q2. By whom are you employed and in what capacity?

A2. RBF Consulting as Environmental Services Manager.

Q3. Please briefly outline your responsibilities at RBF Consulting.

A3. As Environmental Services Manager at RBF Consulting, I oversee and prepare Environmental and Planning studies for public and private sector clients, under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). Responsibilities also include staff training, public hearing presentations, and

coordination of the RBF Consulting extensive in-house team of experts as well as various subcontractors. My service area includes most of the Western U.S., focusing primarily on California, with a specialization in serving public and private sector water industry clients by preparing feasibility studies, environmental compliance documents, community participation programs, and regulatory permitting. Please refer to Attachment A, Resume for Kevin Thomas.

Q4. Describe for the Commission your education.

A4. B.A., 1985, Environmental Engineering (Geography-Ecosystems Plan III), University of California, Los Angeles. While at UCLA, I also served as tutor and Supervisor of Biology Tutors for the Academic Advancement Program. Subsequent education, also summarized further in Attachment A, includes various technical coursework and seminars in air quality and noise, as well as attending frequent (typically annually) CEQA and NEPA updates through the Association of Environmental Professionals (AEP), UC Extension, and/or CLE. I also maintain my professional education through involvement in several professional organizations: as co-Chair of ARTBA's (American Road and Transportation Builder) Environmental Committee and Chair of its NEPA Subcommittee; Chair of ACEC's (American Council of Engineering Consultants) Land Use, Environmental and Sustainability Committee; Chair of AEP's (Association of Environmental Professionals) 2010 Annual Conference; and member of NAEP's (National Association of Environmental Professionals) NEPA Working Group.

I am a Certified Environmental Professional, 1999 (# 0383), through NAEP's Academy of Board Certified Environmental Professionals.

Q5. Please describe your professional experience.

A5. I have over 24 years' experience in the environmental compliance and permitting of major capital improvement and land development projects with particular expertise in brackish

groundwater and coastal seawater desalination projects (see detailed discussion below). I have managed a wide range of environmental planning projects, including, air quality and noise studies, community participation programs, highly controversial hillside development projects, state-of-the-art visual analyses, facility siting and due diligence studies, and technical support for the California Energy Commission facility siting process. I have been employed by RBF Consulting since 1985, and have served as Project Manager, Project Director, Senior Director, and now serve as Vice President and Environmental Services Manager. I played a major role in developing several of RBF's key technical disciplines, including our in-house air quality and noise studies (developing the original calculation spreadsheets based on applicable guidance documents), our in-house Phase I Hazardous Materials Assessment group, and our in-house Regulatory Permitting group.

Over the past 10 years, I have managed or participated in the preparation of feasibility studies, environmental compliance and/or regulatory permitting for many of California's desalination projects, including.

- Coastal Water Project Proponent's Environmental Assessment (PEA), California American Water (PEA Task Manager and Regulatory Permitting Task Manager);
- Seawater Desalination Project EIR, City of Huntington Beach (EIR Project Manager): included evaluation of subsurface intake alternatives;
- Encina Desalination Facility Program EIR, San Diego County Water Authority (EIR Project Manager): included evaluation of subsurface intake alternatives;
- Temporary Ocean Water Desalination Demonstration Project EIR and Regulatory Permitting, West Basin Municipal Water District (EIR Project Manager and Regulatory Permitting Manager);
- Full Scale Desalination Plant Feasibility Study, West Basin Municipal Water District (Project Manager and Environmental and Permitting Task Manager): includes subsurface intake evaluation;
- Under Ocean Desalination Demonstration Project IS/EA, City of Long Beach

(Project Director);

- Arlington Desalter Expansion IS/MND, Santa Ana Watershed Project Authority (CEQA Task Manager);
- Chino I and Chino II Desalters Project EIR, Chino Desalter Authority (EIR Task Manager);
- Doheny Desalination Project Feasibility Study, Metropolitan Water District of Orange County (technical lead for Feasibility Study section on environmental and permitting issues); and
- Camp Pendleton Desalination Project Feasibility Study, San Diego County Water Authority (Environmental/Permitting Technical Memo Task Manager).

I have never had a CEQA or NEPA document successfully challenged in court (other than a stipulated recirculation of a single EIR section, and a voluntary recirculation of two EIR sections, neither of which was court-ordered).

Q6. Do you have any other professional experiences?

A6. I have served on several panels and workshops related to desalination environmental and permitting issues. I also serve on several professional organization committees that provide relevant experience. With respect to desalination-related presentations, I have served on the following conference panels, workshops and/or technical sessions:

- Multi-State Salinity Coalition (annual conference planning committee, and session moderator/panelist in 2008);
- CA/NV AWWA (desalination committee, serving as moderator or panelist at the several Fall and Spring Conferences between 2007 and 2009;
- Orange County Water Association (moderator for 2006 desalination lunch workshop);
- The Seminar Group (2004 panelist, and conference co-chair of 2006 Desalination Conference held in Santa Barbara);

- ACWA, 2005 Workshop panelist (Dana Point, CA);
- AMTA (conference panelist, 2006 Annual Conference, Anaheim); and AEP (2009 Annual Conference panel moderator).

I am actively involved in several professional organizations which allow me to stay current on technical, policy, legislative and legal issues related to desalination. These professional organizations and my roles are as follows:

- Member, Association of Environmental Professionals (AEP), 1985 to Present
  - Orange County Chapter President
  - Southern California Regional Director
  - Administrative Vice President
  - Co-Chair, 1990 State Conference
  - Chair, 2010 State Conference

- Member, National Association of Environmental Professionals, 1992 to Present
  - Member, NAEP NEPA Working Group (2006)

- Member, American Planning Association (APA), 1992 to Present
- Member ARTBA Environmental Committee (2006) to Present
  - Co-Chair, Environmental Committee
  - Chair, NEPA SubCommitteeMulti-State Salinity Coalition
  - Conference Planning Committee (2006 to Present)
- CA/NV AWWA, Desalination Committee (2007 to Present)
- ACEC, California Chapter
  - Chair, Land Use, Environment & Sustainability Committee (4/09 to Present)

Q7. Have you previously testified before government agencies? If so, please identify subject of your testimony?

A7. I have presented desalination projects before various local and state agencies, as well as municipal water district boards. I have also served as agency representative in presenting CEQA and NEPA projects before various public agencies, and have testified before the California Energy Commission and Ocean Protection Council.

Q8. What is the purpose of your testimony?

A8. The purpose of my testimony is to respond to specific questions set forth below as identified in the March 26, 2009 final "Joint Scoping Memo Ruling of Assigned Commissioner and Administrative Law Judge Setting forth Scope and Schedule for Phase 2" of this Coastal Water Project proceeding, as related to the environmental and permitting process for the Coastal Water Project.

II. THE PROPOSED PROJECT AND ALTERNATIVES

Q9. Which project or alternative most effectively or feasibly meets the established need and serves the present or future public convenience and necessity?

A9. For the purposes of this testimony and Certificate of Public Convenience and Necessity ("CPCN") proceeding, California American Water suggests that the term "effective" be used as defined in Merriam-Webster's as "1a) producing a decided, decisive or desired effect", and the term "feasible" be used as defined in CEQA Guidelines §15126.6(f)(1) and related case law, to include "site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries..., and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site...".

California American Water believes that the proposed Coastal Water Project ("CWP" or "proposed Project"), a Moss Landing Power Plant (MLPP)-based seawater desalination plant, is the most effective and feasible means to meet the "established need" for a replacement water source. The CWP also is the best project alternative that will serve the "present or future public convenience and necessity" of ensuring a long-term, reliable water source for the customers of the Monterey District.

"Effectiveness" should consider the ability of the alternative to be implemented in a timely manner. It is essential that the CWP be implemented immediately, in order to "diligently proceed" pursuant to State Water Resource Control Board Order 95-10 (referred to hereafter as "Order 95-10"). Considering the long delays that California American Water has already faced in the California Public Utilities Commission's ("CPUC" or "Commission") processing of the CWP Application (with PEA completion and Application submittal in July 2005), it is imperative that the CPUC approve a project that can be implemented with minimal delay. Failure to do so would result in continued strain on the Carmel River ecosystem, delayed restoration of the Seaside Basin overdraft, continued economic impact to Monterey and vulnerability to water shortages, and continued exposure of California American Water ratepayers to ongoing NOAA Fisheries settlement payments.[1] Within this context, as discussed further below and noted throughout California American Water's testimony, the proposed MLPP project has the highest potential to produce the desired result, namely, the timely compliance with Order 95-10. California American Water's North Marina Project could also provide the "desired effect" through timely compliance with Order 95-10. As set out in its April 15, 2009

[1] Due to delays in implementing the CWP outside the control of California American Water, to avoid as much as $330 million in fines, California American Water has agreed to pay more than $10 million to compensate for damage to steelhead habitat on the Carmel River. In a July 26, 2006 settlement with the National Oceanographic and Atmospheric Administration's Fisheries Division, California American Water agreed to pay $3.8 million in "mitigation fees" by Aug. 28 2006 and $1.1 million in each of six years thereafter, or until it develops a new water source for the Monterey Peninsula. In return, NOAA Fisheries agreed to "cooperate" with California American Water by explaining to regulatory agencies why the company's proposed desalination plant in Moss Landing would be a boon to steelhead habitat and should be paid for by California American Water's ratepayers.

comment letter on the DEIR that is referred to in this Direct Testimony, California American Water's objective is that the potential environmental impacts of the proposed Project, and all other DEIR alternatives analyzed at CEQA project level, including the Regional Alternative Project, be accurately, fairly and fully treated in the final EIR, and be similarly addressed in this CPCN Phase 2 proceeding. California American Water believes that achieving this objective is necessary in order for the Commission to objectively determine which CWP alternative will most effectively meet the long-term water supply needs of California American Water's Monterey District customers.

With respect to meeting the "established need," California American Water believes this conclusion is most relevant with respect to the "basic project objectives" as defined in the PEA and CPCN Application. Specifically, the proposed Project is best able to "meet the established need" for the following reasons:

1) The PEA and DEIR demonstrate the proposed Project's ability to effectively meet both Order 95-10 and the Seaside Basin Adjudication mandates.

2) The Direct Testimony sponsored by Mr. F. Mark Schubert, P.E., and Mr. David P. Stephenson demonstrate that the proposed Project provides a cost-effective means for achieving Order 95-10 and Seaside Basin Adjudication compliance.

3) The proposed Project has the capability of meeting regional needs, as addressed in the PEA Regional Alternative. ~~California American Water notes that this regional option, although studied in detail within the PEA, was rejected in the DEIR without adequate explanation (refer to Attachment B, the CAW DEIR Comment Letter dated April 15, 2009, and the attachment thereto entitled Attachment A, General Comment #1, page 1, and Specific Issues #7, pages 16 and 17).~~

4) The proposed Project utilizes existing MLPP infrastructure that will create no added environmental impact to marine or land resources (i.e., by use of current seawater intake and discharge tunnels), and is based on proven technology demonstrated by approximately 13,000 Reverse Osmosis plants worldwide, producing over 5 billion gallons a day of potable water from seawater.[2] Specifically, the proposed Project has been designed to avoid adverse environmental effects, in part by withdrawing a small portion (23 mgd) of MLPP's permitted 1,224 mgd ocean water intake from the "back end" of MLPP's cooling water system (less than two percent of MLPP's permitted intake capacity). When compared to the myriad of legal, political, and environmental

[2] Source: 21st GWI/IDA Worldwide Desalting Plant Inventory, 2008

issues associated with the use of vertical wells in the Salinas Valley Groundwater Basin as sourcewater, the use of the MLPP intakes is more feasible than the Regional project alternative. ~~As noted in the DEIR, the proposed Project would therefore not result in any significant marine life impacts related to sourcewater intake. Also refer to Attachment B, the CAW DEIR Comment Letter dated April 15, 2009, Attachment A thereto, Specific Issues #2, pages 4-7, as well as the attached documents from the California Energy Commission (Attachment C) and September 15, 2006 letter from LS Power (Attachment D).~~

5) ~~The proposed Project would result in the least environmental impact. As noted in its official comment letter, California American Water carefully considered and rejects as inaccurate the DEIR's overstatement of certain MLPP and North Marina project alternative environmental impacts, and contends that it understates certain Regional project alternative impacts (Attachment B, the CAW DEIR Comment Letter dated April 15, 2009, Attachment A thereto, Specific Issue #2, #3, and #4).~~ As stated in the following testimony, California American Water believes that the actual "unavoidable" significant impacts of the proposed Project, if any exist, would be similar or less than the unavoidable significant impacts of the Regional project alternative.

Notwithstanding the preceding testimony, California American Water recognizes that the MLPP desalination plant and related intake/discharge issues have certain real or perceived risks. These include the need to negotiate real estate and access agreements with the owner of MLPP, and certain interest group and regulatory staff interests that have advocated against the use of existing, open ocean intakes at coastal power stations for seawater desalination to meet potable water needs of urban communities. ***California American Water is not aware of any substantial evidence that suggests that these issues would in fact preclude approval and construction of the proposed Project.*** In addition to my testimony above ~~and Attachment B, CAW DEIR Comment Letter, Specific Issue #2 and #3~~, California American Water provides the following testimony to substantiate the viability of once through cooling (OTC) energy plants like that at Moss Landing~~.~~:

1) The recent U.S. Supreme Court ruling on April 1, 2009 held that EPA permissibly used costs as a consideration in promulgating Clean Water Act Section 316(b) Phase II regulations. This Supreme Court ruling suggests that OTC may be less likely to be "forced out" regardless of cost or site-specific issues (see Attachment ~~E~~B);

2) LS Power (which in 2007 merged with Dynegy, present owner/operator of the MLPP) submitted a comment letter to the State Water Resources Control Board, dated

September 15, 2006, in which it took strong exception to any regulations that would arbitrarily force MLPP to abandon OTC. This comment letter provides considerable evidence of the likelihood of the long-term operation of MLPP's OTC system (refer to Attachment ~~D~~C);

3) The California Energy Commission's study on existing OTC systems indicated potentially significant environmental impacts and high costs for converting MLPP to dry cooling (refer to Attachment ~~C~~D). In light of the recent Supreme Court ruling noted above, to suggest that MLPP's OTC system will be abandoned is speculative;

4) Pursuant to *Fairview Neighbors vs. County of Ventura* (1999, 70 Cal. App. 4th238), the appropriate baseline for the EIR, and for the CPUC's evaluation of alternative intakes, is the existing permitted capacity of MLPP. At 1,224 mgd, the proposed MLPP desalination plant would represent less than two percent of MLPP's permitted capacity and, as noted in the DEIR, would not result in any additional impact due to the desalination plant source water coming off of the "back end" of MLPP after entering the MLPP OTC system.

5) The recently submitted state Senate Bill 42, originally proposed eliminating continued use of OTC systems by existing and future coastal energy plants, has been amended to eliminate reference to desalination, in response to broad industry opposition, and has been pushed back as a "two-year bill" (i.e. further potential legislative consideration delayed until 2011);[3]

6) Governor Schwarzenegger's Drought Proclamation on February 27, 2009 included the commitment that: "*7. To the extent allowed by applicable law, state agencies within my administration shall prioritize and streamline permitting and regulatory compliance actions for desalination, water conservation and recycling projects that provide drought relief*;" [4] and

7) The Governor's Office, Cal-EPA and others expressed strong support for a currently proposed 50 mgd desalination plant co-located at NRG's Encina Generating Station in Carlsbad, requiring over 300 mgd of ocean intake from the sensitive Agua Hedionda Lagoon.[5]

Notwithstanding the preceding evidence indicating the viability and effectiveness of California American Water's MLPP project, California American Water in its PEA and CPCN Application (as amended), proposed a North Marina sub-surface project as an alternative to the proposed Project, which avoids reliance on MLPP's existing open ocean intake. As noted in the DEIR and in CPUC public meetings, the North Marina project alternative is environmentally preferred over the Phase I Regional project alternative

[3] http://www.aroundthecapitol.com/billtrack/analysis.html?file=sb_42_cfa_20090417_154234_sen_comm.html
[4] http://gov.ca.gov/press-release/11556/.
[5] http://www.carlsbad-desal.com/news.aspx?id=218.

proposed in the DEIR. Also as noted above, the North Marina project alternative could easily be modified to expand its production to meet future regional needs, and incorporate aspects of the Phase I Regional Project that are deemed desirable. ~~.~~

It is also important to note here that some of the claimed disadvantages of the North Marina Alternative to the Phase 1 Regional Project are erroneous or unsubstantiated, including:

- the claimed "unavoidable" slant well noise impact discussed below is erroneous;
- the purported "risk" of slant wells in the fifth point is not substantiated; and
- the sixth point is erroneous because water quality monitoring conducted by the Seaside Basin Watermaster has shown that there does not exist a seawater intrusion "problem" which the DEIR claims to alleviate through the Phase I Regional Project vertical wells;[6] and nowhere in the DEIR description of the Phase I Regional Project does it describe the increment of its yield that would alleviate the alleged problem.

Q10. Are the proposed Project **alternatives** infeasible based on the DEIR, and are there significant environmental impacts not adequately addressed or analyzed therein?

A10. Yes to both questions. For the purposes of this testimony and CPCN proceeding, California American Water suggests that the term "infeasible" be used as defined in CEQA Guidelines §15126.6(f)(1) and related case law, to include "site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries..., and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site...". Furthermore, pursuant to CEQA Guidelines §15126.6(f), California American Water

[6] The Seaside Basin Watermaster's *Seawater Intrusion Analysis Report, Seaside Groundwater Basin, Monterey County California* (HydroMetrics LLC, 2007 and 2008) provided detailed reviews of seawater intrusion mechanisms, and analyzed historical water quality data for indications of seawater intrusion in the Seaside Groundwater Basin. The geochemical analyses showed that no seawater intrusion has been detected in the Seaside Groundwater Basin, and there is no indication of seawater intrusion into either of the Basin's principal aquifers – the Paso Robles Formation (shallow) or Santa Margarita Sandstone (deep).

suggests that the evaluation of alternatives should focus on alternatives that "would avoid or substantially lessen any of the significant effects of the project" and would also "feasibly attain most of the basic objectives of the project". For the purposes of CEQA and this CPCN proceeding, the CPUC should consider the "basic project objectives" to be in compliance with Order 95-10 and the Seaside Basin Adjudication. As further described in this Direct Testimony, and as detailed further in ~~Attachment B,~~ CAW's Comment Letter on the CWP draft EIR (dated April 15, 2009):

- the "No Project Alternative" fails to meet basic Project objectives, and would result in significant impacts to Carmel River and its environment;
- the "Regional Project" has feasibility issues not adequately addressed in the DEIR;
- the DEIR's so-called "Environmentally Preferred" Alternative (i.e. North Marina project alternative with vertical wells substituted for California American Water's proposed slant wells) and the "CalAm Growth" Alternative, both have technical feasibility issues not adequately defined in the DEIR; and
- the Regional Project sponsor, Marina Coast Water District, has recently been presenting a modified version of the Regional Project, suggesting that the Salinas River treatment plant can be eliminated or delayed (therefore eliminating the key distinguishing feature between the North Marina project and Phase I Regional project), and proposing a much larger desalination plant. This revised configuration and sizing of the Phase I Regional Project has not been evaluated in the DEIR, and it is not clear how the CPUC or other interested parties can properly evaluate the modified Regional Project without adequate analysis in the EIR. Furthermore, although Marina Coast Water District suggests that the revised Phase I Regional Project desalination plant would only need to be increased to 13 mgd due to eliminating (or delaying) the Surface Water Treatment Plant, California American Water believes that this desalination plant would in fact need to be much larger, closer to 15 mgd, in order to return the required percentage of groundwater to the Salinas Valley Groundwater Basin. This issue is discussed further below, and raises additional cost, growth, and groundwater impact concerns for the Phase I Regional Project.

~~It is not clear in the DEIR how the Project Objectives were utilized, in combination with CEQA's requirement to develop alternatives that reduce or avoid significant Project impacts, in developing (and screening) the EIR alternatives and "ranking" alternatives as "preferred." This is fundamental analysis necessary under CEQA to make an informed~~

~~decision regarding the relative merits of the proposed Project in comparison with the alternatives (refer to testimony below, and to Attachment B, the CAW DEIR Comment Letter, Specific Issue #7).~~

California American Water notes at the outset that so far in this proceeding CPUC staff has given inadequate consideration to the regional alternative California American Water analyzed in the PEA [PEA Regional Alternative], or the use of HDD wells or slant wells at MLPP. To the extent that CPUC staff perceives feasibility or environmental issues with the Proposed Project, those two projects are feasible alternatives and there is no evidence in this proceeding to justify excluding their consideration.

~~The DEIR does not adequately describe why the Regional Alternative proposed in California American Water's PEA was rejected (it receives only a brief footnote on page 7-41). Nor has the DEIR adequately explained why the PEA Alternative 3 (MLPP HDD Alternative) was rejected from further study (the MLPP HDD concept could easily be configured as a slant well concept). This issue is important in order to preserve as many feasible alternatives as possible for consideration by the Commission. Also refer to Attachment B, the CAW DEIR Comment Letter, General Issue #1 and Specific Issue #7).~~

The DEIR should have identified various possible drawbacks of subsurface intakes in general (i.e., unproven operation for this application), and vertical wells in particular (i.e., Salinas Basin groundwater rights issues, potentially higher groundwater contaminant levels, such as nitrates, in brine discharge, etc.). The DEIR's discussion of the "No Project" Alternative is too brief and contains inadequate information and analysis. This fact is particularly important in light of the additional analysis contained in the PEA, and the relevance of the No Project Alternative with respect to the Project Objectives, and potentially significant impacts to sensitive habitat and species dependent upon the Carmel River. The DEIR should contain an expanded discussion of the No Project Alternative, as

well as the role of Conservation and Recycling (often viewed as "alternatives" by desalination opponents).

~~Pursuant to CEQA and case law, because (and to the extent that) the DEIR cites cost as a basis for evaluating project alternatives, the DEIR should have demonstrated the validity of such financial assumptions. For example, the DEIR noted that the "Regional Project" and "Water for Monterey County" have as a central mission statement the primary goal of providing more "affordable" water.~~

~~The DEIR ascribes various additional benefits to the Regional project alternative without adequately discussing the ability of the proposed CWP or its North Marina project alternative to meet these objectives, either "as is" or with minor modifications. When comparing the Phase I Regional project alternative to the North Marina project alternative (at DEIR page 7-57), the DEIR should have made a more relevant comparison in terms of cost and impact and in terms of the incremental cost and impact of the additional capacity provided by the Salinas River water treatment facility versus a corresponding incremental cost and impact from an expanded desalination plant at North Marina. Moreover, of the six reasons given on DEIR page 7-57 for preferring the Phase I Regional project alternative, three relate to an inferred cost advantage that is not substantiated; the fourth relates to the "unavoidable" slant well noise impact discussed below, the fifth point is not substantiated; and the sixth point should be revisited based on information provided in Attachment B, California American Water's DEIR Comment Letter. Where there are site-specific nuances between the Phase I Regional project alternative desalination plant site and the North Marina alternative desalination plant site, the DEIR should have provided a discussion regarding the ability for either site to be modified to maximize environmental or other benefits.~~

A. No Project Alternative

The DEIR correctly notes the failure of the "No Project Alternative" to achieve the Project's "basic objectives" (pages 7-42 and 7-43). Based on this information, and discussion provided in the PEA (3.0-72, and throughout Section 5), California American Water contends that the No Project Alternative is infeasible. California American Water also notes that, due to the severe water rationing that would be required if the SWRCB approves the pending draft Cease and Desist Order, it is reasonably foreseeable that California American Water and other water agencies would be forced to develop one or more alternative water supplies (as discussed at length in the PEA Section 9), which would themselves likely have one or more significant environmental impacts.

B. Phase I Regional Project

~~As described in Attachment B, California American Water's official Comment Letter on the DEIR,~~ California American Water has ~~discussed~~ concerns regarding the feasibility ~~concerns with CPUC staff regarding this alternative~~ of the Phase 1 Regional Project. These concerns include, but are not limited to, the following ~~DEIR issues regarding the Phase 1 Regional Project Alternative~~:

~~1) It has greater environmental impact in comparison to the CWP and its North Marina project alternative, due to its proposed construction of a 14 Million Gallon/Day (mgd) Salinas River surface water treatment plant and related facilities. As noted in testimony below, the DEIR overstates potential significant impacts of the CWP and North Marina Alternative desalination plants, and understates potential impacts of the Phase I Regional Project. California American Water notes that the DEIR fails to provide an adequate comparison between the Phase I Regional Project and the proposed Project (at MLPP); the DEIR "analysis" is limited to one sentence on DEIR page 7-60.~~

~~2)~~1) The DEIR understated the potential impacts related to Salinas River diversions. California American Water believes that the DEIR-described treatment processes for the Salinas River would not remove pesticides and nitrates; therefore it is not shown that the water would be treated to potable standards, and the resulting potential impacts to the Santa Margarita aquifer in the Seaside Basin are not described. California American Water believes that additional "advanced

treatment" processes, which are also not described in this DEIR, may be required to remove pesticides and nitrates and other contaminants of concern from the Salinas River sources in order to allow the project water to comply with the SWRCB Anti-Degradation Policy and the Central Coast Regional Water Quality Control Board's Basin Plan for the Seaside Basin. These additional facilities would expand the Phase I Regional project alternative's "footprint" as well as increase construction and operational costs. Finally, the DEIR does not acknowledge the potential public health risk perception of using contaminated Salinas River stream flow for potable water. This issue, at minimum, should have been identified on page ES-15 of the DEIR under "Areas of Controversy". The DEIR does not describe the significance, nor potential political, legal and regulatory complexities associated with diverting and storing Salinas River surface water in the Salinas Groundwater Basin. The DEIR substantially understates the Endangered Species Act implications of this proposed diversion, merely referencing it as "consultation" when in fact the surface diversion would require extensive formal Endangered Species Act Section 7 consultation, a formal Biological Assessment (yet to be prepared), a formal Biological Opinion (yet to be initiated), and incidental take authorization from the U.S. Fish and Wildlife Service and/or NOAA Fisheries.

~~3)~~2) ~~The DEIR understated and miscalculated potential physical impacts of the Phase 1 Regional alternative related to Salinas Basin Groundwater extractions.~~ The ~~DEIR statement in the project~~ description of the Phase 1 Regional Alternative made publicly available to California American Water implies that an average 3,400 AFY of desalinated water will be returned to the Salinas Valley Groundwater Basin (SVGB) (via the 80-acre Monterey Regional Water Pollution Control Agency's C-SIP storage pond) and/or to the Marina Coast Water District (MCWD). However, the 10 mgd desalination plant in the Regional project alternative would only be capable of producing a maximum of 11,200 AFY of production; and if 3,400 AFY were to be delivered to MCWD/SVGB, only 7,800 AFY would remain for delivery to California American Water. ~~As noted in Chapters 2 and 3 of the DEIR, where~~ When California American Water's replacement water supply requirement of 12,500 AFY ~~is described, California American Water is relying on~~ 10,900 AFY of supply must be produced from the desalination plant in dry and critically-dry years when the Salinas River Surface Water Treatment Plant would not be producing water; or when Salinas River water stored in the Seaside Basin from previous diversions would be insufficient to meet California American Water's annual customer demand. Based on the outcome of hydrogeologic modeling performed for the DEIR, the Phase I Regional project alternative and the North Marina project alternative would extract significantly different volumes of "groundwater of freshwater origin" (i.e., 3400 AFY for the Phase I Regional Project; 800 AFY for the North Marina Project). These two alternatives would use different subsurface intakes (i.e., vertical coastal wells behind the sand dunes into the 180-foot aquifer for the for Regional Project; slant wells under the ocean floor for North Marina Project); and it is not apparent, or explained in the DEIR, how the Phase I Regional project alternative will simultaneously meet its delivery requirements to California American Water, MCWD, and SVGB. Should the Phase I Regional Project be enlarged to meet

these obligations, there would be an incremental increase in the environmental effects of ~~its~~ this expanded facility~~ies~~, and increase in the costs ~~impacts~~ associated with increasing the size of the desalination plant and~~, in addition to~~ the more extensive vertical well system to support this plant. These incremental increases affect the effectiveness and feasibility of the Phase 1 Regional Project.~~, are neither described nor analyzed in the DEIR.~~

~~4)~~3) The DEIR contains a technically infeasible proposed mitigation to address groundwater quality impacts related to brine discharge. The DEIR has identified a "legacy pesticide" (i.e. dieldrin) as an issue, which it asserts is present in the groundwater and the ocean. The DEIR proposed a "reduced desalination plant operation" mitigation measure for the Regional Project (Phases 1 and 2) that would prevent the prohibited concentration of dieldrin in the ocean. However, since the Phase I Regional Project extracts the fresh water component of groundwater, and leaves a more concentrated discharge, it is a physical fact that **any** amount of desalination discharge will "increase" the dieldrin concentration in the ocean. If this mitigation were to be adopted, its result would effectively prevent the Regional Project desalination plant from being operable. The DEIR analysis for this issue is technically flawed in other aspects, including relying upon imputed raw data from San Francisco Bay, and dieldrin concentration based on data from a single well in the Seaside Basin (not the Salinas Basin, where the Phase I Regional project alternative extraction wells are proposed to be located).

~~5) The DEIR understates potentially significant impacts related to future growth. The DEIR improperly concludes that the Phase I Regional project alternative does not have significant growth-inducing impacts, based upon an incorrect (or inadequately supported) assertion that the Marina Coast Water District's 2,400 AFY demand is an "immediate need" to serve existing and/or approved redevelopment, particularly in the City of Marina portion of former Fort Ord. The DEIR discussion is also internally inconsistent on this point. The redevelopment projects in question have not been built and are not part of an existing CEQA baseline, and should, therefore, only be considered as part of future conditions to be evaluated in the discussion of the Phase I Regional Project's growth inducing and cumulative impacts relative to providing water for future developments.~~

4) The stated objective of the Phase I Regional Project alternative – to provide yield to meet a purported Marina Coast Water District 2,400 AFY of additional demand – is inaccurate because an "immediate need" to serve existing and/or approved redevelopment, particularly in the City of Marina portion of former Fort Ord, does not exist. The redevelopment projects in question have not been built and are not part of an existing CEQA baseline. The record is devoid of any consideration of how the incremental costs of constructing this larger plant will be passed on only to those future customers, so that existing customers are not financing improvements to meet future developments.

~~6)~~5) As noted earlier, the DEIR has used project cost as a basis for alternative selection and ranking. In addition, the DEIR and CPUC staff publicly have indicated that Marina Coast Water District is the intended owner/operator of the Regional

Project. The DEIR understates and leaves undefined potential institutional issues related to the management, construction, operation and financing of the Phase I Regional Project. California American Water reserves the right to further comment on this issue. California American Water is not aware of specific "TMF" (Technical, Management, Financial) analysis done for any public agency to suggest that the Phase I Regional Project can be designed, constructed, operated and financed in a manner that is preferable to the proposed Project.

C. Environmentally Preferred Alternative

This issue is discussed at length in ~~Attachment B,~~ CAW's DEIR Comment Letter (Issue 11). The DEIR does not analyze its own purported "Environmentally Superior Alternative" (North Marina Project with vertical wells) as a ***separate*** alternative. Thus, the feasibility of this alternative is not demonstrated, as required by CEQA, since it fails to identify, describe and analyze the environmental affects of an "upsized" North Marina Project desalination plant, which would be needed to produce 15 mgd (i.e., requires four more mgd than the North Marina project alternative) if vertical wells are substituted for slant wells. As noted above, similar impacts and issues apply to the apparent "modified" Phase I Regional Project being publicly presented by Marina Coast Water District.

D. ~~California American Water Growth Alternative~~

~~This issue is discussed at length in Attachment B, CAW's DEIR Comment Letter (Issue 11). This issue discussed above also applies to the "California American Water Growth Project" (pages 7-52 and 7-53), as the DEIR uses a "mix and match" approach to combine the North Marina Project with the Regional Project vertical well concept without evaluating its implications. The DEIR should separately discuss a "Regional Alternative" at both the MLPP and at North Marina using the Project facilities as proposed by California American Water.~~

III. INFEASIBLE DEIR MITIGATION MEASURES

Q11. Are there infeasible DEIR mitigation measures?

A11. Yes. California American Water has identified several mitigation measures that appear to either be unnecessary, unsubstantiated or technically infeasible. If implemented, these measures are likely to either delay or otherwise unnecessarily increase the cost of the CWP to California American Water and its ratepayers. California American Water may need to submit further testimony on this issue as acknowledged in the March 26, 2009 joint scope and schedule ruling by Commissioner Bohn and ALJ Minkin. The need for supplemental testimony will depend on further discussions with CPUC staff, and review of forthcoming Final EIR documents including Responses to Comments and Errata. At present, California American Water believes the following mitigation measures to be unwarranted, unsubstantiated, and/or technically infeasible (these issues are also noted in ~~Attachment B,~~ CAW's DEIR comment letter dated April 15, 2009):

~~1) **Tsunami run-up study** (Mitigation Measure 4.1-9). This measure calls for a site-specific tsunami run-up study, and suggests substantial structural improvements. This appears excessive and unwarranted in light of the fact that the MLPP desalination plant site elevations range from 17 to 27 feet "amsl" (above mean sea level), and the DEIR notes that the upper limit of tsunami hazards (one has never been historically documented to occur at Moss Landing) is 17 feet amsl. The DEIR does not address the change in site elevation that would occur with the proposed improvements. Considering the protective benefits of Moss Landing Harbor and numerous intervening structures, it is doubtful that the MLPP site would be adversely affected in the unlikely event that a tsunami could occur. Even in the unlikely event that one would occur, it would seem more reasonable to simply require the facility to participate in applicable emergency response systems so that the very few employees or visitors that may be on the site could evacuate in a timely manner.~~

~~2) **Aerodynamic construction trucks** (Mitigation Measure 4.8-5a). This measure requires that the CWP or alternative project contractor retrofit all vehicles with BAT or California Air Resources Board (CARB) approved efficiency technology, both of which are undefined terms. This mitigation is within the jurisdiction of the CARB, and is not appropriate in this DEIR. The CARB regulates mobile source emissions, and the construction industry has mandated timetables to achieve various emission reduction strategies. Furthermore, as noted in Attachment B, the CAW DEIR Comment Letter (Specific Issue #6), California American Water questions the validity~~

~~and methodologies used in the DEIR's significance determination for this impact (greenhouse gas emissions).~~

~~3) **Low SF6 Leak Rate Circuit Breaker and Monitoring** (Mitigation Measure 4.8-5b). Similar to the aerodynamic truck mitigation, California American Water believes that this mitigation is within the jurisdiction of CARB. The mitigation is derived from CARB's "Scoping Plan" for greenhouse gas emissions, and has not yet been adopted as a formal regulation, pending CARB's normal public hearing process and input from the affected industries relative to feasibility and alternatives.~~

~~4)~~1) **Dieldrin mitigation measure for Regional Project** (Mitigation Measure 6.1-4). This mitigation would make the Phase 1 Regional alternative inoperable, as described in the preceding testimony regarding infeasible alternatives. Furthermore, this measure has the potential to adversely affect every CWP alternative (but not the California American Water-proposed project), as every alternative involves the use of groundwater. Among all alternatives, the Phase I Regional Project would have the worst impact and be most likely to suffer feasibility or cost issues resulting from compliance with this measure, due to the Phase I Regional Project's vertical wells, which draw in a much higher percentage of "fresh" groundwater (more than three times the amount drawn in by California American Water's North Marina Project's slant wells).

~~4) **Discharge Monitoring** (Mitigation Measure 4.1-4a). California American Water believes that the need for this mitigation measure is unsubstantiated based upon extensive discharge modeling conducted in the PEA. The mitigation is more appropriately developed within the context and jurisdiction of the Regional Water Quality Control Board ("RWQCB") (similar to Mitigation 4.2-1 and 4.4-2a). The mitigation requires continuous salinity monitoring at multiple locations for an impact that has not been demonstrated as significant (refer to testimony below regarding impacts of solution components).~~

~~6)~~2) **Discharge Monitoring** (Mitigation Measure 4.1-4b). ~~Similar to 4.1-4a, the need for this mitigation has not been demonstrated, and the mitigation is more appropriately developed within the context and jurisdiction of the RWQCB.~~ The measure appears to be technically infeasible as well, similar to the dieldrin mitigation for the Phase I Regional Project, in that it could be interpreted to require the desalination plant to cease operating in the event that the intake source water has a contaminant that exceeds Ocean Plan requirements.

~~5) **Aeration System** (Mitigation Measure 4.1-4c). The DEIR has not adequately demonstrated the need for this mitigation, which would more appropriately be developed within the context and jurisdiction of the RWQCB.~~

~~6) **Benthic Sampling** (Mitigation Measure 4.3-2a). California American Water believes that the need for this mitigation measure is unsubstantiated based upon extensive discharge modeling conducted in the PEA. The mitigation is more appropriately developed within the context and jurisdiction of the RWQCB (similar to Mitigation 4.2-1). The mitigation requires extensive benthic monitoring at multiple locations for~~

an impact that has not been demonstrated as significant (refer to testimony below regarding impacts of solution components).

7) **Particle Sampling** (Mitigation Measure 4.3-2b). California American Water believes that the need for this mitigation measure is unsubstantiated based upon extensive discharge modeling conducted in the PEA. The mitigation is more appropriately developed within the context and jurisdiction of the RWQCB (similar to Mitigation 4.2-1). The mitigation requires extensive particle sampling at multiple locations for an impact that has not been demonstrated as significant (refer to testimony below regarding impacts of solution components). Preliminary particle calculations, provided to CPUC staff during its preparation of the DEIR, indicated that the actual anticipated impact of MLPP discharge would be *de minimus* with respect to particle size distribution (refer to Attachment F).

8) **Sensitive Species Surveys** (Mitigation Measures 4.4-1a and 4.4-1b). These measures appear to be premature, pending regulatory agency consultation, selection of a specific project by the CPUC or others, and development of more detailed engineering plans to allow more accurate estimations of impact, if any. These mitigation measures are more appropriately addressed within the context and jurisdiction of affected regulatory agencies, including CDFG, USFWS and USACOE. Mitigation 4.4-1b(1) appears excessively restrictive considering that project design plans indicate the affected "waterway" crossings to be via either jack/bore technology or via pipelines in bridge decks, neither of which would suggest a need to avoid rainy seasons.

9) **Construction Fugitive Dust Control Plan** (Mitigation Measure 4.8-1a-d). The DEIR does not provide an adequate technical basis to warrant this mitigation. California American Water suggests that the measure be reworded to simply require that the project contractors comply with applicable construction emission thresholds, and allow the contractor flexibility as to how to achieve the threshold. It is unclear, and unsubstantiated, as to why the DEIR reduces the construction threshold by 10 percent. Vehicle idling restrictions should simply be stated in terms of applicable mobile emissions requirements.

10) **ASR Construction Noise** (Mitigation Measure 4.9-1a to 1f). The DEIR does not provide adequate substantiation for this "impact", and the mitigation measures should be rewritten to reference applicable local noise ordinance requirements. Where noise ordinance compliance is not possible (as may be the case with night-time construction noise), the DEIR should identify a range of unconventional yet potentially feasible mitigation measures that should be investigated by the contractor to reduce noise impacts to the maximum extent practical. The DEIR presents an overly conservative (and technically incorrect) approach to evaluating ASR construction impacts. Regarding noise issues presented in DEIR Section 4.9, the analysis seems to be 'doubly conservative' and incorrect in the quantitative evaluation of the ASR construction noise issues. In essence, the DEIR analysis is based on an incorrect assumption that the noise generation of drilling is greater that it actually is, while conversely assuming the noise reduction capabilities of sound walls to be less than they are, the net effect of which is to substantially overstate the construction-related ASR noise impact. If the CPUC still believes an unavoidable significant impact may

occur, the CPUC could add another mitigation measure to specify that ASR sites should be sited, where feasible, 50 feet or more from any existing residence. Yet an additional mitigation measure would be to offer alternative temporary lodging to residents within a specified distance of the ASR construction area, deemed to represent an unacceptable temporary noise exposure, if that is the only means of avoiding the "Unavoidable Impact" threshold.

11) **Cultural Resource Avoidance** (Mitigation Measure 4.13-d). This measure should be clarified as only applying to resources that are deemed "significant", and should reference provisions for salvage or other mitigation in the event that avoidance is not feasible. Construction monitoring should be clarified as only being required during initial mass grading operations or deep excavations (such as foundation footings).

12) **Energy Conservation Plan** (Mitigation Measure 4.14-2). The DEIR does not provide adequate substantiation for this mitigation requirement.

13) **North Marina Alternative Slant Well Construction Impact** (Mitigation Measure 4.9-1a to 1f). As with Item 12 above (ASR Construction Noise), the DEIR does not provide adequate substantiation for this "impact", and the mitigation measures should be rewritten to reference applicable local noise ordinance requirements. Where noise ordinance compliance is not possible (as may be the case with night-time construction noise), the DEIR should identify a range of unconventional yet potentially feasible mitigation measures that should be investigated by the contractor to reduce noise impacts to the maximum extent practical. The DEIR presents an overly conservative (and technically incorrect) approach to evaluating slant well construction noise impacts. Regarding noise issues presented in DEIR Section 4.9, the analysis seems to be 'doubly conservative' and incorrect in the quantitative evaluation of the slant well construction noise issues. In essence, the DEIR analysis is based on an incorrect assumption that the noise generation of drilling is greater that it actually is, while conversely underestimating the noise reduction capabilities of temporary construction barriers to be less than they are, the net effect of which is to substantially overstate the construction-related slant well noise impact. If the CPUC still believes an unavoidable significant impact may occur, the CPUC could add another mitigation measure to specify that slant well sites should be sited, where feasible, 50 feet or more from any existing residence. Yet additional mitigation measures would be to offer to the hotel/timeshare owner reasonable compensation for the temporarily affected hotel/timeshare units (essentially rent the affected units for the duration of peak construction noise, estimated at approximately two to three weeks), specify slant well construction equipment that is known to result in lower noise levels than assumed in the DEIR, specify drill rig orientation relative to affected units (which has been shown to reduce noise exposure), and/or specify minimum STC ratings for temporary construction sound barriers, if that is the only means of avoiding the "Unavoidable Impact" threshold.

IV. OTHER CONSIDERATIONS

Q12. To the extent that the proposed project and/or project alternatives result in significant and unavoidable impacts, are there overriding considerations pursuant to CEQA Guidelines §15093 that merit approval of the proposed project or a project alternative?

A12. Yes. As noted in the DEIR and PEA, the proposed Project is essential to comply with Order 95-10, in order to reduce impacts to the Carmel River and provide a reliable water supply for the Monterey District service area. California American Water reserves the right to comment on forthcoming specific CEQA findings and the required Statement of Overriding Considerations, which will be prepared by the CPUC for the selected "project". Project objectives noted in the PEA and CPCN Application include:

- Comply with Order 95-10
- Provide critical water supply to Monterey Peninsula
- Allow California American Water to reduce pumping from Carmel River
- Reduce impacts to sensitive species and habitat
- Restore groundwater levels and comply with Seaside Basin adjudication
- Create additional temporary construction jobs
- Avoid potentially devastating economic impacts which may otherwise occur in the event of continued water shortages
- Avoid potentially higher rate increases which may otherwise occur should a regional water solution be delayed further

In addition, Commission approval of the proposed Project or one of its alternatives would become even more essential, notwithstanding any significant, unavoidable impacts that may remain in the final EIR, should the State Water Resource Control Board adopt its proposed Cease and Desist Order that represents a severe threat to the economic viability of the Monterey Peninsula.

Q13. What are the environmental impacts of "solution components", including comparative impacts of alternative desalination plant locations?

A13. The DEIR addresses the potential environmental impacts of the proposed Project, based upon the CPCN Application, as amended, and the associated PEA. ~~However, as noted in~~

~~this testimony and in~~ Attachment B~~, the DEIR has overstated certain impacts of the proposed Project. In particular, the DEIR overstates potential impacts with respect to MLPP sourcewater intake, suggesting that this location may result in unavoidable significant cumulative impacts; the DEIR overstates MLPP discharge impacts, and does not adequately explain failure to utilize extensive PEA modeling; and the DEIR overstates greenhouse gas emissions and ASR construction noise.~~ The proposed Project will not have an unavoidable significant ***cumulative*** impact associated with the MLPP sourcewater intake, due to the relatively small Project contribution, the use of available mitigation, and the lack of evidence to justify a finding of cumulative unavoidable significant impact. There is no evidence that the impact of the proposed Project's discharge relative to MLPP discharge, ASR construction noise levels with the attenuation of the proposed mitigation, and the proposed Project's greenhouse gas emission amount to an unavoidable significant cumulative impact. California American Water notes that the proposed Project avoids several potentially significant environmental impacts and institutional/legal issues associated with the Phase 1 Regional project alternative, including Salinas River diversion (i.e., water quality, water rights, and regulatory permitting obstacles; Salinas Groundwater Basin pumping (i.e., water rights, overlying property owners and stakeholder expressed opposition); growth-inducing impacts; and physical construction and operational impacts of the proposed Salinas River diversion Surface Water Treatment Plant. ~~As noted in this testimony, and California American Water's DEIR official comments, the DEIR also fails to identify additional design measures or mitigations to address potential impacts of the project, such as ASR construction noise mitigation.~~

Q14. Does that conclude your Direct Testimony on Phase 2 issues?

A14. Yes, it does.